IN THE UNITED STATES DISTRICT COURT

FOR THE DISTRICT OF DELAWARE

CORDIS CORPORATION,	)	
	)	
Plaintiff,	)	
	)	
v.	)	Civ. No. 03-027-SLR
	)	
BOSTON SCIENTIFIC CORPORATION and SCIMED LIFE SYSTEMS, INC.,	)	
	)	
	)	
Defendants.	)	

Steven J. Balick, Esquire, John G. Day, Esquire and Tiffany Geyer Lydon, Esquire of Ashby & Geddes, Wilmington, Delaware. Counsel for Cordis Corporation. Of Counsel: Gregory L. Diskant, Esquire, William F. Cavanaugh, Esquire, Kim J. Landsman, Esquire, Eugene M. Gelernter, Esquire, Thomas W. Pippert, Esquire, Kathleen M. Crotty, Esquire, Scott W. Parker, Esquire, Rosa E. Son, Esquire, Catherine A. Williams, Esquire and Laura Storto, Esquire of Patterson, Belknap, Webb & Tyler, LLP, New York, New York, and Theodore B. Van Itallie, Esquire and Eric I. Harris, Esquire of Johnson & Johnson, New Brunswick, New Jersey.

Josy W. Ingersoll, Esquire, John W. Shaw, Esquire, Adam W. Poff, Esquire, Glenn C. Mandalas, Esquire and Karen E. Keller, Esquire of Young Conaway Stargatt & Taylor, LLP, Wilmington, Delaware. Counsel for Boston Scientific Corporation and Boston Scientific Scimed, Inc. Of Counsel: John M. Desmarais, Esquire and Peter J. Armenio, Esquire of Kirkland & Ellis, New York, New York.

MEMORANDUM OPINION

Dated: May 11, 2006
Wilmington, Delaware

ROBINSON, Chief Judge

I. INTRODUCTION

On January 13, 2003, plaintiff Cordis Corporation ("Cordis") filed this patent infringement action against defendants Boston Scientific Corporation and Scimed Life Systems, Incorporated (collectively "BSC") alleging infringement of U.S. Patent No. 4,739,762 ("the '762 patent") by BSC's Express stent and other stents. (D.I. 1) On March 5, 2003, BSC answered and counterclaimed against Cordis, denying that its stents infringe the '762 patent and alleging that some of Cordis' stents infringed U.S. Patent No. 5,922,021 ("the '021 patent"). (D.I. 26) On August 2, 2004, Cordis filed an amended complaint alleging that BSC's Liberté stent infringes the '762 patent and U.S. Patent No. 5,895,406 ("the '406 patent"). (D.I. 161) On August 18, 2004, BSC answered the amended complaint. (D.I. 163) A jury trial was held from June 13, 2005 to June 20, 2005 on the issue of Cordis' claims of patent infringement against BSC. On June 21, 2005, the jury returned a verdict that: (1) the Express, Taxus Express, Express Biliary stents (collectively, "the Express stents") and Liberté stents literally infringe claim 23 of the '762 patent; (2) BSC has induced literal infringement of claim 1 of the '762 patent with respect to those stents; (3) the Liberté stent literally infringes claim 2 of the '406 patent; and (4) claim 2 of the '406 patent is neither anticipated nor rendered obvious by the prior art. (D.I. 360) A separate jury

trial was held from June 21, 2005 to July 1, 2005 on the issue of BSC's claims of patent infringement against Cordis. On July 1, 2005, the jury returned a verdict that: (1) Cordis' Cypher stent infringes claim 8 of the '536 patent; (2) claim 8 of the '536 patent is not invalid for obviousness; (3) Cordis' Cypher, BX Velocity, BX Sonic and Genesis stents do not literally infringe claim 36 of the '021 patent; (4) the Cypher, BX Velocity, BX Sonic and Genesis stents infringe the "corners" limitation of claim 36 of the '021 patent under the doctrine of equivalents; and (5) claim 36 of the '021 patent is not invalid for obviousness. (D.I. 381)

This court has jurisdiction pursuant to 28 U.S.C. § 1338. Pending before the court are: (1) BSC's renewed motion for judgment as a matter of law of noninfringement and invalidity; (2) BSC's motion for reconsideration of the without prejudice aspect of the court's order dismissing Cordis' infringement claims against the Taxus Liberté stent; and (3) Cordis' renewed motion for judgment as a matter of law or, in the alternative, a new trial on infringement and invalidity of the '021 patent. (D.I. 378, 382, 398)

II. BACKGROUND

The disputes relate to expandable stents such as those disclosed in the '762, '406 and '021 patents. Balloon expandable stents and other types of stents are used to treat diseased blood

vessels in the heart and in other areas of the body. A stent is a small device that holds open an artery just like scaffolding inside a tunnel keeps the tunnel from collapsing. At issue in this case are balloon expandable stents which are used in conjunction with angioplasty balloons. The stent is placed on a balloon and inserted into an artery via a catheter. Once the balloon is at the area of blockage, it is inflated, which causes the stent to expand and press against the vessel wall, thereby opening the artery. The balloon is then deflated and removed, leaving the expanded stent in the artery to keep the vessel open and allow blood to flow.

The '762 patent, entitled "Expandable Intraluminal Graft, and Method and Apparatus for Implanting an Expandable Intraluminal Graft," includes both apparatus and method claims. The apparatus claims are directed to an expandable tubular member that serves as vascular scaffolding. The method claims of the '762 patent describe the process of implanting the stent into a diseased vessel. The devices accused of infringing the '762 patent are the Express, Taxus Express, Express Biliary and Liberté stents, each of which is a balloon expandable stent.

The '406 patent, entitled "Axially Flexible Stent," includes several apparatus claims. These claims are directed to a stent comprised of longitudinally disposed bands, where each band defines a generally continuous wave, various links maintain the

bands in a tubular structure, and the links and bands define an expandable structure having axial flexibility in an unexpanded configuration. The device accused of infringing this patent is the Liberté stent.

The '021 patent, entitled "Intravascular Stent," also includes numerous apparatus claims. The apparatus claims at issue are directed to a stent comprising a first expansion strut column, a second expansion strut column, and a first connecting strut column. The device accused of infringing the '021 patent is the BX Velocity stent, a balloon expandable stent.

III. STANDARD OF REVIEW

A. Renewed Motion for Judgment as a Matter of Law

BSC has renewed its motion for judgment as a matter of law pursuant to Fed. R. Civ. P. 50(b). Cordis has also renewed its motion for judgment as a matter of law. To prevail on a renewed motion for judgment as a matter of law following a jury trial, the moving party "'must show that the jury's findings, presumed or express, are not supported by substantial evidence or, if they were, that the legal conclusion(s) implied [by] the jury's verdict cannot in law be supported by those findings.'" Pannu v. Iolab Corp., 155 F.3d 1344, 1348 (Fed. Cir. 1998) (quoting Perkin-Elmer Corp. v. Computervision Corp., 732 F.2d 888, 893 (Fed. Cir. 1984)). "'Substantial' evidence is such relevant evidence from the record taken as a whole as might be accepted by

a reasonable mind as adequate to support the finding under review." Perkin-Elmer Corp., 732 F.2d at 893. In assessing the sufficiency of the evidence, the court must give the nonmoving party, "as [the] verdict winner, the benefit of all logical inferences that could be drawn from the evidence presented, resolve all conflicts in the evidence in his favor and, in general, view the record in the light most favorable to him." Williamson v. Consol. Rail Corp., 926 F.2d 1344, 1348 (3d Cir. 1991); Perkin-Elmer Corp., 732 F.2d at 893. The court may not determine the credibility of the witnesses nor "substitute its choice for that of the jury between conflicting elements of the evidence." Perkin-Elmer Corp., 732 F.2d at 893. In sum, the court must determine whether the evidence reasonably supports the jury's verdict. See Dawn Equip. Co. v. Kentucky Farms Inc., 140 F.3d 1009, 1014 (Fed. Cir. 1998).

Likewise, in order to promote finality after trial, as well as to preserve the historical function of the jury as the trier of facts, the court "ought to grant a new trial on the basis that the verdict was against the weight of the evidence only where a miscarriage of justice would result if the verdict were to stand." Williamson v. Consolidated Rail Corp., 926 F.2d 1344, 1352 (3d Cir. 1991).

B. Motion for a New Trial

In the alternative to its motion for judgment as a matter of law, BSC has moved for a new trial pursuant to Fed. R. Civ. P. 59(a). Cordis has also moved for a new trial as an alternative to its motion for judgment as a matter of law.[1] Federal Rule of Civil Procedure 59(a) provides, in pertinent part:

> A new trial may be granted to all or any of the parties and on all or part of the issues in an action in which there has been a trial by jury, for any of the reasons for which new trials have heretofore been granted in actions at law in the courts of the United States.

Fed. R. Civ. P. 59(a). The decision to grant or deny a new trial is within the sound discretion of the trial court and, unlike the standard for determining judgment as a matter of law, the court need not view the evidence in the light most favorable to the verdict winner. See Allied Chem. Corp. v. Darflon, Inc., 449 U.S. 33, 36 (1980); Olefins Trading, Inc. v. Han Yang Chem. Corp., 9 F.3d 282 (1993); LifeScan Inc. v. Home Diagnostics, Inc., 103 F. Supp.2d 345, 350 (D. Del. 2000) (citations omitted). See also 9A Wright & Miller, Federal Practice and Procedure § 2531 (2d ed. 1994) ("On a motion for new trial the court may consider the credibility of witnesses and the weight of the evidence."). Among the most common reasons for granting a new

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[1]Although BSC does not denominate its motion as one for a new trial in the alternative, it argues in that motion that a new trial should be granted if the court does not grant BSC's motion for judgment as a matter of law.

trial are: (1) the jury's verdict is against the clear weight of the evidence, and a new trial must be granted to prevent a miscarriage of justice; (2) newly-discovered evidence exists that would likely alter the outcome of the trial; (3) improper conduct by an attorney or the court unfairly influenced the verdict; or (4) the jury's verdict was facially inconsistent. See Zarow-Smith v. N.J. Transit Rail Operations, 953 F. Supp. 581, 584-85 (D.N.J. 1997) (citations omitted). The court must proceed cautiously, mindful that it should not simply substitute its own judgment of the facts and the credibility of the witnesses for those of the jury. Rather, the court should grant a new trial on the basis that the verdict was against the weight of the evidence only where a miscarriage of justice would result if the verdict were to stand. See Williamson v. Consol. Rail Corp., 926 F.2d 1344, 1352 (3d Cir. 1991); EEOC v. State of Del. Dep't of Health and Soc. Servs., 865 F.2d 1408, 1413 (3d Cir. 1989).

C. Motion for Reconsideration

The purpose of a motion for reconsideration is to "correct manifest errors of law or fact or to present newly discovered evidence." Max's Seafood Café ex rel. Lou-Ann, Inc. v. Quinteros, 176 F.3d 669, 677 (3d Cir. 1999). Accordingly, a court may alter or amend a ruling if the movant demonstrates at least one of the following: (1) a change in the controlling law; (2) availability of new evidence not available when the decision

issued; or (3) a need to correct a clear error of law or fact or to prevent manifest injustice. See id.

IV. DISCUSSION

A. BSC's Renewed Motion for Judgment as a Matter of Law of Noninfringement and Invalidity

BSC moves for judgment as a matter of law or, in the alternative, a new trial with respect to several issues: (1) noninfringement of the '406 patent; (2) invalidity of the '406 patent; and (3) noninfringement of the '762 patent. (D.I. 378)

1. Infringement of the '406 Patent

A determination of infringement requires a two-step analysis. First, the court must construe the asserted claims so as to ascertain their meaning and scope. Second, the claims as construed are compared to the accused product. See KCJ Corp. v. Kinetic Concepts, Inc., 223 F.3d 1351, 1355 (Fed. Cir. 2000). Claim construction is a question of law while infringement is a question of fact. See id. To establish literal infringement, "every limitation set forth in a claim must be found in an accused product, exactly." Southwall Tech., Inc. v. Cardinal IG Co., 54 F.3d 1570, 1575 (Fed. Cir. 1995). An accused product that does not literally infringe a claim may still infringe under the doctrine of equivalents if each limitation of the claim is met in the accused product either literally or equivalently. See Sextant Avionique, S.A. v. Analog Devices, Inc., 172 F.3d 817, 826 (Fed. Cir. 1999).

Pursuant to its motion, BSC argues that the court should grant judgment as a matter of law that the Liberté stent does not infringe claim 2 of the '406 patent. (D.I. 402) Alternatively, BSC argues that a new trial on the issue of infringement is necessary. (Id.)

In support of its argument that the court should grant judgment as a matter of law that the Liberté stent does not infringe the '406 patent, BSC offers two arguments. First, BSC argues that "Cordis improperly argued that a combination of open space and metal forms the 'wave' required by claim 2 of the Gray '402 patent." (D.I. 402 at 5-8) Secondly, BSC contends that "Cordis failed to introduce any competent evidence that the metal of the Liberté stent was a 'wave' under the court's claim construction." (D.I. 402 at 8-10)

At trial, Cordis argued that claim 2 of the '406 patent was infringed by BSC's Liberté stent.[2] BSC argues that the Liberté

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[2]Claim 2 of the '406 patent depends from claim 1, which reads in relevant part:

> A stent having first and second ends with an intermediate section therebetween, and a longitudinal axis, comprising:
> a plurality of longitudinally disposed bands, wherein each band defines a generally continuous wave having a spatial frequency along a lone segment parallel to the longitudinal axis; . . . .

'406 patent, col. 5, ll. 26-32. Claim 2 of the '406 patent reads as follows:

> A stent according to claim 1, wherein each link is

stent does not infringe claim 2 because it does not meet the "wave" limitation of claim 2 as construed by the court[3] since only metal surfaces can form the "wave" structure. BSC cites to the cross-examination testimony of Cordis' expert, Dr. Buller, to suggest that "the metal surfaces of the Liberté stent must form the claimed 'wave' in order for there to be infringement." (D.I. 402 at 8, citing D.I. 366 at 699:4-24) BSC contends that Cordis' argument that the Liberté stent infringes claim 2 because it has "circumferential and longitudinal 'springs'" is insufficient to meet the "wave" limitation and cannot prove infringement. (D.I. 402 at 8-9) However, as Cordis correctly points out, the '406 specification refers to the "waves" as "springs" and notes that they "provide the stent with . . . flexibility." (D.I. 404 at 3, citing '406 patent, col. 3, l. 66 - col. 4, l. 31) BSC contends that "[t]he term 'springs' cannot serve as a surrogate for the claim term 'wave.'" Nevertheless, even if the evidence offered by Cordis regarding "springs" were alone insufficient to prove

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axially displaced from any circumferentially adjacent link.

'406 patent, col. 5, ll. 40-41.

[3]The "wave" limitation - "a plurality of longitudinally disposed bands, wherein each band defines a generally continuous wave having a spatial frequency along a lone segment parallel to the longitudinal axis" - was construed by the court to mean "the stent has multiple elongated surfaces that run parallel to the stent's long axis, each of these surfaces having the undulating appearance of a continuous wave." (D.I. 334 at 2-3)

infringement, Dr. Buller also applied the court's claim construction, premised on the term "wave", to suggest that the Liberté stent infringed claim 2 of the '406 patent. (D.I. 365 at 523:1-538:22) BSC next argues that, aside from irrelevant testimony concerning "springs", Dr. Buller offered "only conclusory assertions that the Liberté stent satisfied the 'wave' limitation." (D.I. 402 at 9, citing D.I. 365 at 526:15-21, 527:13-19; D.I. 366 at 558:12-559:13) However, Dr. Buller appears to have provided some context to his assertions by explaining that the Liberté stent has a plurality of longitudinal bands, that a longitudinal band of the Liberté stent "fairly can be described as an undulating structure going from end to end of the stent," and that each such band defines a continuous wave under the court's construction. (D.I. 365 at 523:1-538:22; D.I. 366 at 725:3-7) Furthermore, Dr. Buller addressed other limitations of claim 2 in explaining that the links and wavy longitudinal bands in the Liberté stent define "an expandable structure having axial flexibility in an unexpanded configuration," as required by claim 2. (D.I. 365 at 531:18-532:7) In light of this evidence, a reasonable jury could find that the Liberté stent infringes claim 2 of the '406 patent. Therefore, the court shall deny BSC's request for judgment as a matter of law that the Liberté stent does not infringe claim 2 of the '406 patent.

As an alternative to its motion for judgment as a matter of law, BSC argues that the court should order a new trial on the issue of infringement. First, BSC contends that the jury's verdict was against the weight of the evidence. (D.I. 402 at 10-11) Second, BSC maintains that "a new trial is warranted because the disputed claim term 'wave' was not construed." (D.I. 420 at 11-12)

In arguing that the jury's verdict was against the weight of the evidence, BSC suggests that, while Cordis provided only conclusory evidence that the Liberté stent met the "wave" limitation of claim 2 of the '406 patent, BSC provided "overwhelming evidence that the backtracking metal of that stent could not possibly satisfy that limitation under any proper construction of the term 'wave.'" (D.I. 402 at 10) However, BSC offered a similar argument at the claim construction phase of trial, when it argued that "wave" should be construed as a "naturally occurring waveform that cannot backtrack along the longitudinal axis." (D.I. 230 at 29) However, the court did not adopt such a construction, instead construing the "wave" limitation to mean that "the stent has multiple elongated surfaces that run parallel to the stent's long axis, each of these surfaces having the undulating appearance of a continuous wave." (D.I. 334 at 2-3) While Dr. Moore testified as an expert for BSC that a structure such as that of the Liberté stent which

"loops back" on itself cannot be a "wave" (D.I. 368 at 1185:8-1186:1), Dr. Buller offered contrary testimony in suggesting that the bands of the Liberté stent had an undulating structure which could be viewed as a continuous wave (D.I. 365 at 523:1-538:22; D.I. 366 at 725:3-7). Based on the evidence offered at trial, the jury was free to credit the testimony of Dr. Buller in finding that the Liberté stent infringed claim 2 of the '406 patent.

BSC also argues that a new trial is warranted because the court committed an error of law since the disputed claim term "wave" was not explicitly construed. Specifically, BSC contends that the court's construction of the "wave" limitation, "[a]lthough providing useful and necessary guidance on other aspects of the 'wave' limitation, . . . did not resolve one of the central disputes between the parties - what constitutes a 'wave' for purposes of Claim 2 of the Gray '406 patent." (D.I. 402 at 11) BSC cites Sulzer Textil A.G. v. Picanol N.V., 358 F.3d 1356, 1366-67 (Fed. Cir. 2004), to suggest that the court should have instructed the jury on the meanings of all disputed terms used in the claims in suit and that the court failed to do so when it "left the jury free to make its own determination of the meaning of the claims." (D.I. 402 at 11) As the Federal Circuit noted, "The jury must be told that the court has made a claim construction ruling that the jury must follow and cannot be

left free to apply its own reading of disputed terms to the facts of the case." Sulzer Textil, 358 F.3d at 1366. In the case at issue, the court met these requirements by advising the jury that the "wave" limitation had been construed, specifically stating its construction, and instructing the jury that it was obligated to apply the court's construction to, inter alia, its infringement analysis. (D.I. 369 at 1543:3-12, 1545:13-20, 1547:16-23)

Aside from the particular construction ascribed to the wave limitation, BSC's contentions at trial appear inconsistent with its argument that the term "wave" was not construed by the court. First, BSC never suggested before or during trial that the "wave" limitation had not been construed. In fact, BSC consistently offered arguments at trial to suggest that the court **had construed** that limitation, although contending that the Liberté stent did not meet that limitation. (D.I. 368 at 1175:10-1176:1, 1192:16-21; D.I. 369 at 1482:4-1490:5, 1488:15-16) As for BSC's argument that the court's use of the phrase "surfaces having the undulating appearance of a continuous wave" was not helpful to the jury in understanding the wave limitation, BSC's own proposed construction of the phrase "generally continuous wave" in that limitation was "a naturally occurring **waveform**." (D.I. 230 at 29) BSC's further suggestion that such a waveform "cannot have multiple circumferential values at any single longitudinal

location" (id.) was rejected by the court in its construction. (D.I. 334 at 2-3) BSC suggests neither how its proposed construction would have provided any additional relevant understanding to the jury regarding the asserted claim when compared with the information provided under the court's construction, nor how any such understanding would have been supported by evidence to affect the verdict on infringement.

As its next assertion, BSC argues that the court's claim construction left room for the jury to disagree on how one of ordinary skill in the art would determine if the Liberté stent met the wave limitation. (D.I. 402 at 11) BSC contends that the jury was presented with various conflicting meanings for the term "wave" at trial such that the jury could "choose an erroneous construction and engage in a fatally-flawed infringement analysis." (D.I. 402 at 11-12) However, these arguments do not impact the appropriateness of the court's claim construction. Claim construction alone cannot be expected to resolve all infringement issues in a case. See United States Surgical Corp. v. Ethicon, Inc., 103 F.3d 1554, 1567 (Fed. Cir. 1997) ("Markman explicitly recognized that the application of the claim to the accused device [is] for the jury."). Here, both parties offered expert testimony and other evidence regarding whether the Liberté stent met the limitations of claim 2 of the '406 patent and such evidence provided substantial support for the verdict reached by

the jury as to infringement. As noted above, the court construed the "wave" limitation and properly instructed the jury such that no error was present. Thus, no new trial on the issue of infringement is warranted.

2. Validity of the '406 Patent

A patent is presumed valid and the burden of proving invalidity, whether under § 112 or otherwise, rests with the challenger. See 35 U.S.C. § 282. In order to overcome this presumption, the party challenging validity bears the burden of proving by clear and convincing evidence that the invention fails to meet the requirements of patentability. See Hewlett-Packard Co. v. Bausch & Lomb, 909 F.2d 1464, 1467 (Fed. Cir. 1990). Clear and convincing evidence is evidence that "could place in the ultimate factfinder an abiding conviction that the truth of [the] factual contentions are 'highly probable.'" Colorado v. New Mexico, 467 U.S. 310, 316 (1984).

Under 35 U.S.C. § 102(b), "[a] person shall be entitled to a patent unless the invention was patented or described in a printed publication in this or a foreign country . . . more than one year prior to the date of the application for patent in the United States." A claim is anticipated only if each and every limitation as set forth in the claim is found, either expressly or inherently described, in a single prior art reference. Verdegaal Bros., Inc. v. Union Oil Co., 814 F.2d 628, 631 (Fed.

Cir. 1987); Scripps Clinic & Research Found. v. Genentech, Inc., 927 F.2d 1565, 1576 (Fed. Cir. 1991) ("There must be no difference between the claimed invention and the reference disclosure, as viewed by a person of ordinary skill in the field of the invention.").

An anticipation inquiry involves two steps. First, the court must construe the claims of the patent in suit as a matter of law. Key Pharms. v. Hercon Laboratories Corp., 161 F.3d 709, 714 (Fed. Cir. 1998). Second, the finder of fact must compare the construed claims against the prior art. Id. A finding of anticipation will invalidate the patent. Applied Med. Res. Corp. v. U.S. Surgical Corp., 147 F.3d 1374, 1378 (Fed. Cir. 1998).

In determining whether a patented invention is explicitly anticipated, the claims are read in the context of the patent specification in which they arise and in which the invention is described. Glaverbel Societe Anonyme v. Northlake Mktg. & Supply, Inc., 45 F.3d 1550, 1554 (Fed. Cir. 1995). The prosecution history and the prior art may be consulted if needed to impart clarity or to avoid ambiguity in ascertaining whether the invention is novel or was previously known in the art. Id. The prior art need not be *ipsissimis verbis* (i.e., use identical words as those recited in the claims) to be anticipating. Structural Rubber Prods. Co. v. Park Rubber Co., 749 F.2d 707, 716 (Fed. Cir. 1984).

A single prior art reference also may anticipate a claim where one of ordinary skill in the art would have understood each and every claim limitation to have been disclosed inherently in the reference. Continental Can Co. USA Inc. v. Monsanto Co., 948 F.2d 1264, 1268 (Fed. Cir. 1991). The Federal Circuit has explained that an inherent limitation is one that is necessarily present and not one that may be established by probabilities or possibilities. Id. That is, "[t]he mere fact that a certain thing may result from a given set of circumstances is not sufficient." Id. at 1269. The Federal Circuit also has observed that "inherency operates to anticipate entire inventions as well as single limitations within an invention." Schering Corp. v. Geneva Pharms. Inc., 339 F.3d 1373, 1380 (Fed. Cir. 2003). Moreover, recognition of an inherent limitation by a person of ordinary skill in the art before the critical date is not required to establish inherent anticipation. Id. at 1377.

To establish that a patent claim is obvious, clear and convincing evidence must exist to show that "the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art." 35 U.S.C. § 103 (2003). The question of obviousness, therefore, turns on four factual inquiries: (1) the scope and content of the prior art; (2) the level of ordinary skill in the art; (3) the differences between the claimed invention and the prior art; and

(4) any objective indicators of non-obviousness, more commonly termed secondary considerations. See Graham v. John Deere Co., 383 U.S. 1, 17-18 (1966); B.F. Goodrich Co. v. Aircraft Braking Sys. Corp., 72 F.3d 1577, 1582 (Fed. Cir. 1996). The existence of each limitation of a claim in the prior art does not, by itself, demonstrate obviousness. Instead, there must be a "reason, suggestion, or motivation in the prior art that would lead one of ordinary skill in the art to combine the references, and that would also suggest a reasonable likelihood of success." Smiths Indus. Med. Sys., Inc. v. Vital Signs, Inc., 183 F.3d 1347, 1356 (Fed. Cir. 1999). "Such a suggestion or motivation may come from the references themselves, from knowledge by those skilled in the art that certain references are of special interest in a field, or even from the nature of the problem to be solved." Id. at 1356.

To rebut a prima facie case of obviousness based on prior art, objective evidence of nonobviousness may be used. Tec Air, Inc. v. Denso Mfg. Mich, Inc., 192 F.3d 1353, 1360 (Fed. Cir. 1999). This objective evidence includes: (1) a long-felt and unmet need in the art for the invention; (2) failure of others to achieve the results of the invention; (3) commercial success of the invention; (4) copying of the invention by others in the field; (5) whether the invention was contrary to accepted wisdom of the prior art; (6) expression of disbelief or skepticism by

those skilled in the art upon learning of the invention; (7) unexpected results; (8) praise for the invention by those in the field; and (9) independent invention by others. See Graham, 383 U.S. at 17-19. "The objective evidence of nonobviousness . . . should when present always be considered as an integral part of the analysis." Demaco Corp. v. F. Von Langsdorff Licensing Ltd., 851 F.2d 1387, 1393 (Fed. Cir. 1988) (quoting W.L. Gore & Assocs. Inc. v. Garlock, Inc., 721 F.2d 1540, 1555 (Fed. Cir. 1983), cert. denied, 469 U.S. 851 (1984)).

The primary argument offered by BSC in support of its motion is that the evidence at trial established that claim 2 of the '406 patent is invalid such that the court should grant judgment as a matter of law on this issue. (D.I. 399) In the alternative to this argument, BSC urges the court to grant a new trial on the validity of the '406 patent because the jury's verdict was against the weight of the evidence. (Id.)

In support of its motion for judgment as a matter of law that claim 2 of the '406 patent is invalid, BSC offers three arguments: (1) it presented clear and convincing evidence that the '762 patent discloses each and every limitation of claim 2 of the '406 patent; (2) the only limitation Cordis contested[4] is merely an inherent characteristic of the claimed structure; and

[4]The limitation in dispute was the "axial flexibility" limitation. The court construed "axial flexibility" to mean "can bend or flex along its length." (D.I. 334 at 4)

(3) even if deemed a structural limitation, the '762 patent discloses "axial flexibility" under the court's construction. (D.I. 399)

As part of its purported "clear and convincing" evidence of invalidity, BSC cites to the testimony of Dr. Moore, whom BSC claims stated that "the Palmaz '762 patent discloses that the rectangular openings or 'slots' shown in the preferred embodiment can take a number of shapes, including 'elongated oval[s].'" (D.I. 399 at 7, citing D.I. 368 at 1196:16-1197:23) BSC argues that such an embodiment of the '762 stent satisfies every limitation of claim 2 of the '406 patent under the court's claim construction. (D.I. 399 at 7-8) BSC also contends that, at a minimum, "the Palmaz '762 patent renders Claim 2 of the Gray '406 patent obvious." (D.I. 399 at 8, citing D.I. 368 at 1205:3-15) In contrast to the assertions of BSC, Cordis maintains that, although Dr. Moore described the '762 patent as having "some degree of flexibility," it was otherwise "universally recognized . . . as being an 'inflexible' stent," as evidenced at trial. (D.I. 405 at 3-4, citing D.I. 364 at 200:19-24, 229:9-19; D.I. 365 at 410:9-412:2; D.I. 366 at 728:13-15; D.I. 368 at 1298:24-1299:2, 1299:22-1300:15) Furthermore, Cordis cites to evidence where Dr. Moore admitted that "in the . . . world of stent designers," the "Palmaz stent" was known as "a rigid stent." (D.I. 368 at 1298:24-1299:2) As Cordis pointed out, Dr. Moore

also conceded that the FDA-approved labeling for that stent stated that the stent was "not flexible." (D.I. 368 at 1299:22-1300:15) In light of this evidence, the jury was entitled to rely on the evidence that the stent of the '762 patent did not have "axial flexibility" such that it did not anticipate or render obvious claim 2 of the '406 patent.

As its second argument in support of its motion for judgment as a matter of law that claim 2 of the '406 patent is invalid, BSC contends that the only limitation which Cordis contested - the "axial flexibility" limitation[5] - is merely an inherent characteristic of the claimed structure such that the '406 patent is anticipated by the '762 patent. (D.I. 399 at 8-11) BSC relies, in part, on Harris Corp. v. Ixys Corp., 114 F.3d 1149, 1152 (Fed. Cir. 1997), to support this contention and asserts that the Federal Circuit has held that "the 'such that' clause at issue in that case 'does nothing to limit the scope of the claim' because it 'merely restates the basic characteristic of' the claimed structure." However, it does not appear from the evidence that "axial flexibility" is a basic characteristic of an unexpanded stent. For example, Cordis has offered evidence that the "axial flexibility" limitation "was added by amendment during

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[5]The text of the "axial flexibility" limitation at issue comes from the final clause of claim 1 of the '406 patent, from which claim 2 depends, and reads: "such that the links and bands define an expandable structure having axial flexibility in an unexpanded configuration."

prosecution to distinguish Gray's ['406] claimed invention from the prior art." (D.I. 405 at 11) BSC has not offered clear and convincing evidence that unexpanded stents have axial flexibility nor attempted to explain why, if that were true, an unexpanded stent could be considered rigid or inflexible, as evidenced by the parties at trial. Furthermore, Cordis counters the argument of BSC by citing various cases which find that the term "such that" and similar terms are often limiting rather than merely used to recite inherent characteristics of a claimed structure. (D.I. 405 at 9-10) Thus, insufficient evidence was offered to establish that "axial flexibility" was an inherent characteristic of the claimed structure.

As its final argument that claim 2 of the '406 patent is invalid, BSC states that even if deemed a structural limitation, the '762 patent discloses "axial flexibility" under the court's construction. (D.I. 399 at 11-18) Cordis responds by noting that "BSC did not offer any contemporaneous evidence that any person of skill in the art viewed it as teaching a flexible stent. (D.I. 405 at 7) As noted above, Cordis introduced evidence that the '762 patent disclosed a "rigid" stent. Furthermore, Cordis argues that the '762 patent can only anticipate the '406 patent if axial flexibility is an inherent characteristic of the version of the '762 patent with oval slots because the '762 patent does not expressly describe any

embodiment as being axially flexible. (D.I. 405 at 6) Since BSC failed to provide sufficient evidence that any embodiment of the '762 teaches a flexible stent, the jury was entitled to find that the '762 patent does not anticipate claim 2 of the '406 patent.

Aside from the evidence adduced regarding the nature of the '762 patent, Cordis argues that evidence of secondary considerations provides further support that the '406 patent was nonobvious. (D.I. 405 at 7-8) BSC refutes this evidence in its reply brief, arguing that any evidence of secondary considerations of nonobviousness were negated at trial. (D.I. 411 at 18-19) Nevertheless, the jury was entitled to gauge the evidence regarding secondary considerations in making its determination on the obviousness issue. Therefore, BSC's motion for judgment as a matter of law of invalidity of claim 2 of the '406 patent shall be denied.

As an alternative to its arguments of invalidity of the '406 patent, BSC contends that the court should order a new trial on the validity of the '406 patent because the jury's verdict was against the weight of the evidence. (D.I. 399) Specifically, BSC argues that "a new trial is warranted because the jury verdict was clearly against the weight of the evidence." (D.I. 399 at 18) However, as reasoned above, Cordis provided sufficient evidence to support the verdict of validity of claim 2

of the '406 patent. Thus, BSC's motion for a new trial on the invalidity of the '406 patent shall be denied.

3. Infringement of the '762 Patent

BSC offers three primary arguments in its motion with respect to the '762 patent. First, BSC argues that the court should grant judgment as a matter of law that the Liberté stent does not infringe claims 1 and 23 of the '762 patent. (D.I. 401) Secondly, BSC urges the court to grant judgment as a matter of law that the Express stents do not infringe claims 1 and 23 of the '762 patent. (Id.) In the alternative to its first two arguments, BSC contends that a new trial is warranted as to all infringement issues regarding the '762 patent. (Id.)

With respect to the Liberté stent, BSC argues that the record reflects that the stent has "banana-shaped openings that run at 30-45 degree angles from the longitudinal axis." (D.I. 401 at 6-10) BSC contends that it moved for summary judgment that the "substantially parallel" claim limitation was not met and asserts that Cordis was able to escape summary judgment before trial only by raising arguments which were never advanced at trial. (D.I. 401 at 11) BSC argues that Cordis instead adopted two new "misleading, strawman" arguments at trial: (1) "that the Liberté stent has substantially parallel slots merely because the stent is expandable (the 'expandability' argument)"; and (2) "that the Liberté stent has substantially parallel slots

merely because the stent is cylindrical in form (the 'Pringles can' argument)." (D.I. 401 at 11) BSC asserts that these new arguments relate neither to the openings of the Liberté stent nor to the claim limitation at issue, thereby offering no support to the jury's verdict of literal infringement. (Id.) However, in contrast to these contentions by BSC, the record does not reflect that Cordis argued that a stent must simply be "expandable" in order to meet the "substantially parallel limitation." At trial, Cordis maintained that a stent with slots that are substantially parallel to the longitudinal axis would allow the diameter of the stent to increase when the slots were opened. (D.I. 365 at 398:15-23) Cordis contrasted this contention with an assertion that a stent with slots that are not substantially parallel to the longitudinal axis of the stent could expand in diameter, but not as a result of slots opening. Cordis suggested that such a stent could increase in length, but not diameter, when the slots were opened. (D.I. 365 at 401:24-402:5) Furthermore, it does not appear that Cordis used the "Pringles can" argument to suggest that every cylindrical stent with slots has "substantially parallel slots"; instead, Cordis offered evidence that the "disposed substantially parallel" limitation "doesn't have to do with whether [the slots] are or aren't the same distance [from the axis]." (D.I. 367 at 784:21-22) The content of this statement by Dr. Buller was supported by the testimony of

Dr. Moore. (D.I. 368 at 1105:6-9) In light of this evidence in the record, the jury was entitled to rely on such arguments in rendering its infringement verdict.

In addition to arguing that Cordis failed to introduce sufficient evidence to support a verdict that the Liberté stent literally infringes the '762 patent, BSC contends that Cordis failed to introduce sufficient evidence to support a finding that the Liberté stent infringes the '762 patent under the doctrine of equivalents. (D.I. 401 at 15-16) The jury did not consider infringement under the doctrine of equivalents since it determined that the Liberté stent literally infringes the '762 patent. Thus, after denying BSC's motion for judgment as a matter of law of noninfringement of the '762 patent by the Liberté stent with respect to literal infringement, there is no reason for the court to consider BSC's contentions regarding the doctrine of equivalents. BSC's motion for judgment as a matter of law of noninfringement of the '762 patent by the Liberté stent under the doctrine of equivalents shall be denied as moot.

As an initial argument that the court should grant judgment as a matter of law that the Express stents do not infringe claims 1 and 23 of the '762 patent, BSC contends that Cordis has "failed to introduce any competent evidence that the EXPRESS stents meet the 'thin-walled' limitation of Claims 1 and 23 of the Palmaz '762 patent." (D.I. 401 at 16) Specifically, BSC suggests that

Cordis presented an infringement theory based on a construction of the "thin-walled" limitation which was rejected by the court and which would render that limitations "superfluous in light of the other claim limitations." (D.I. 401 at 16) BSC bases much of this argument on the fact that, in the claim construction phase of the Civ. No. 97-550-SLR action in this court involving BSC's NIR stent, the court rejected Cordis' proposed construction of the term "thin-walled" as meaning "the stent must have a wall thin enough to provide a low enough profile to allow intraluminal delivery and be thin enough so it can be expanded by an angioplasty balloon." (D.I. 401 at 17, Ex. A at 13) BSC argues that Cordis advanced such a "thin enough" theory of infringement at trial and it was insufficient to support the jury's verdict. BSC asserts that the testimony of Dr. Buller suggested that "the 'thin-walled' limitation is met if a structure meets the basic requirements of a balloon-expandable stent - 'thin enough to be delivered safely through the vasculature,' 'thin enough to be expanded from within' a lumen and 'thin enough to not obstruct the lumen.'" (D.I. 401 at 17, citing D.I. 365 at 451:5-453:14) In addition, BSC contends that this "thin enough" analysis has no bearing on whether the Express stents meet the court's construction of "thin-walled", which requires that "the wall of the tubular member must have little extent from one surface to its opposite at both its first and second diameters." (D.I. 401

at 17; D.I. 334 at 7) Furthermore, BSC maintains that the "thin enough" analysis renders the "thin-walled" limitation superfluous since "the asserted claims both expressly require the same functional capabilities that Dr. Buller applied in lieu of the Court's construction of 'thin-walled.'" (D.I. 401 at 17-18) As an example of such "functional capabilities", BSC cites claim 1, a method claim which comprises such steps as "inserting the prosthesis and catheter within the body passageway", "expanding and deforming the prosthesis at a desired location within the body passageway." (D.I. 401 at 17-18; citing '762 patent, col. 10, l. 61 - col. 11, l. 9) As an additional argument that the Express stents do not infringe the '762 patent, BSC argues that U.S. Patent No. 4,733,665 ("the '665 patent") and the '762 patent derive from the same parent application and share many common terms such that "the 'thin-walled' tubular members of the '762 patent have a narrower meaning than the tubular members of the '665 patent" and the "tubular members of the '762 patent must be even thinner [than the tubular members of the '665 patent]." (D.I. 401 at 18)

In contrast to the assertions of BSC, it appears that Cordis provided sufficient evidence to support the jury verdict of infringement of the '762 patent by the Express stents. As evidence that the Express stents meet the "thin-walled" limitation as construed by the court, Cordis offered evidence

from Dr. Buller that: (1) the Express stent is "very thin"; (2) the Express stent is sufficiently thin to serve the purposes that the '762 patent teaches for using a "thin-walled tubular member"; (3) other stents that practice the '762 patent have thicker walls; and (4) persons in the art used the term "thin" in 1985 to describe a range of thicknesses for stents which include the thickness of the Express stents. (D.I. 406 at 13, citing D.I. 365 at 449:14-463, D.I. 367 at 770:16-782:5) As for the "thin enough" analysis offered by Cordis which was assailed by BSC, it has support in the specification of the '762 patent as interpreted by Dr. Buller. He stated that the Express stent is "thin enough" to serve several of the purposes for a "thin-walled" tubular member as described in the specification of the '762 patent: (1) delivery through the vasculature; (2) extension from within, as by balloon catheter; (3) no obstruction of the lumen when expanded; and (4) no significant damage caused to the vessel wall. (D.I. 365 at 450:24-454:1) Consistent with the claim construction for "thin-walled" offered by the court, Cordis offered evidence that the wall of the tubular member of any of the Express stents must have little extent from one surface to its opposite at both its first and second diameters, or else it would not be able to serve the purposes of a "thin-walled" tubular member. (Id.) In this way, besides offering evidence that the tubular member wall of an Express stent has "little

extent from one surface to its opposite at both its first and second diameters", Cordis permissibly provided a context for the "thin-walled" limitation among the other limitations of the '762 patent. As for BSC's contention that the tubular members of the '762 patent must be even thinner than the tubular members of the '665 patent, such a requirement is absent from the court's claim construction and provides little, if any, suggestion as to whether the Express stents infringe the "thin-walled" limitation of the '762 patent. In addition, the Federal Circuit addressed a similar issue in a case involving Cordis' stents and concluded that the differences between the '665 and '762 patents do not mandate a narrow reading of the '762 claims. Cordis v. Medtronic AVE, 339 F.3d 1352, 1357-58 (Fed. Cir. 2003).

As for BSC's contention that Cordis' approach to infringement rendered the "thin-walled" limitation superfluous, it is not unreasonable that, in claim 1, for example, the steps in the method claim "for implanting a prosthesis within a body" include the use of a "thin-walled, tubular member" which is particularly suited for use with the other steps which comprise that method. Moreover, Cordis did not focus merely on this analysis in its infringement approach, as it offered evidence with respect to infringement for each limitation of the asserted claims, such that the "thin-walled" limitation was not treated as

superfluous or otherwise redundant of any of the other limitations. (D.I. 365 at 445:13-448:12, 472:13-478:22)

BSC's second argument for judgment as a matter of law of noninfringement is based on the assertion that "Cordis' evidence of the thickness of commercial stents is irrelevant and does not support the jury's verdict" because infringement is determined only be comparing the accused products to the claims of the patent at issue, not by comparing the accused product with the preferred embodiment described in the specification or a commercialized embodiment. (D.I. 401 at 19, citing SRI Int'l v. Matsushita Elec. Corp. of Am., 775 F.2d 1107, 1121 (Fed. Cir. 1985)) BSC suggests that such commercial stents have no relevance to whether the Express stents meet the "thin-walled" limitation as construed by the court. (Id.) In addition, BSC argues that any assertion that such a commercial stent is "thin-walled" is immaterial since the term "thin-walled" does not have a single meaning applicable to all balloon-expandable stents. (Id.) While BSC is correct that an infringement analysis requires a comparison of the accused product with the properly construed claims of the patent, this does not render irrelevant evidence of the preferred embodiment or commercialized embodiments when no direct comparison is made with the accused product. For example, when the Federal Circuit specifically considered this court's construction of the "thin-walled"

limitation and affirmed its ruling at the preliminary injunction stage that Cordis was likely to succeed in proving that the Express stent infringes the '762 patent, it considered "testimony that other infringing stents had thicknesses greater than 0.0045 inches." See Cordis Corp. v. Boston Sci. Corp., 99 Fed. Appx. 928, 933 (Fed. Cir. 2004). While the specific holding of that Federal Circuit ruling does not impact the court's current consideration of infringement, the fact that other infringing stents were considered in evaluating the scope of the claims of the '762 patent suggests that such evidence was not irrelevant to the jury's consideration of infringement by the accused product. Nevertheless, even if such evidence regarding non-accused commercial stents were irrelevant, BSC itself offered argument that the Express stent is thicker than certain commercial stents which stent designers have described as "thin." (D.I. 369 at 1456:6-7) Furthermore, BSC relied on evidence of the thicknesses of several non-Express stents as what it purported to be "substantial evidence proving that the EXPRESS stents are not 'thin-walled.'" (D.I. 401 at 28-29) While BSC argued that the term "thin-walled" does not have a single meaning applicable to all balloon-expandable stents, it nevertheless argued that "a range of wall thicknesses considered by those of skill in the art to be 'thin-walled'" existed and that the Express stents fall outside that range. (D.I. 401 at 20-21) If BSC is concerned

that the jury may have considered the allegedly irrelevant arguments of Cordis, any risk of such an occurrence would have been minimized, since the court specifically instructed the jury on how to evaluate infringement and consistently referred to the relevant comparison as that of the asserted claims of the patent with the accused device. (D.I. 369 at 1538:20-1553:5) In light of the inconsistent arguments by BSC and the evidence of infringement offered by Cordis, the court finds that BSC has not shown that Cordis offered insufficient evidence to establish that the Express stents infringe the "thin-walled" limitation of the '762 patent.

As an alternative assertion to its arguments for judgment as a matter of law of noninfringement of the '762 patent by the Express and Liberté stents, BSC contends that a new trial is warranted with respect to all infringement issues concerning the '762 patent. (D.I. 401 at 21-35). As an argument in support of this contention, BSC suggests that the jury's verdict that the Liberté stent and the Express stents infringe the '762 patent was against the weight of the evidence. However, as discussed above, the jury's verdict of infringement had sufficient support from the evidence adduced by the parties. Aside from this argument, BSC urges a new trial due to alleged prejudicial errors by the court during trial.

BSC maintains that the court's exclusion of Dr. Palmaz's testimony concerning the orientation of the "slots" of the Liberté stent constitutes prejudicial error and warrants a new trial on infringement of the Liberté stent.[6] Dr. Buller had already been cross-examined with a significant portion of the very testimony which BSC now contends was prejudicially excluded. (D.I. 366 at 680:21-681:12) When BSC sought to admit that deposition testimony into evidence, however, Cordis objected on the grounds of irrelevance and the court agreed, noting, "I do not think, though, that the evidence, or the testimony past page 69, in other words, the testimony on the Liberté stent is relevant. He's not an expert. He had never seen it before. His

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[6]The deposition testimony at issue reads as follows:

Q. Okay. Looking at the Liberté stent now, does this stent have a longitudinal axis?
A. Yes.
Q. Okay. And could you draw the longitudinal axis on one of the pictures of the stent, perhaps the bottom one which is the largest expanded version?
A. Okay. Just draw a lone. Yeah. (Complies [by marking Palmaz Exhibit 9].) All right.
Q. Now, it is correct that none of the open spaces in this stent are exactly parallel to that longitudinal axis you just drew?
A. That's true. . . . Yes, that's correct.
Q. And isn't it correct that the open spaces in the Liberté stent deviate from the longitudinal axis you just drew by 45 degrees?
A. I don't know. I assume that you have to measure it. Seems to me that they deviate from the longitudinal axis, that's correct.
Q. And they deviate quite a bit. Right?
A. Yes, basically.

impressions just looking at something, it's not relevant to the jury's deliberation on infringement." (D.I. 368 at 1097:9-14) The exclusion of such testimony pursuant to Fed. R. Civ. P. 701 is appropriate, as "the fact that [the inventor] may have had particularized knowledge and experience as a co-inventor of the claimed invention does not necessarily mean he also had particularized knowledge and experience in the structure and workings of the accused device." See Air Turbine Tech., Inc. v. Atlas Copco AB, 410 F.3d 701, 714 (Fed. Cir. 2005). BSC did not offer any evidence that Dr. Palmaz had "particularized knowledge and experience" with the Liberté stent, only asserting that "Dr. Palmaz was competent to speak to how one of ordinary skill in the art would measure the orientation of the slots relative to the longitudinal axis" and that "Dr. Palmaz has conducted research relating to stents and other vascular devices for over twenty years." (D.I. 401 at 26-27, citing D.I. 364 at 238:12-16) Even had BSC offered evidence that Dr. Palmaz had "particularized knowledge and experience" with the Liberté stent, the deposition testimony in question was not relevant to infringement because it did not use the words of the "substantially parallel" limitation at issue or the claim construction of the court thereon, nor is there any indication from that deposition that Dr. Palmaz was provided with such information when offering his testimony. (D.I. 406, ex. A at 70:2-73:1) Essentially, Dr. Palmaz was asked

to offer his opinion regarding a stent with which he was admittedly not familiar and was asked questions which were not sufficiently focused to provide relevant evidence on the issue of infringement. In weighing the limited probative value of this evidence and the risk of undue prejudice that the evidence would cause when considered by the jury, the court correctly excluded this evidence under Federal Rule of Evidence 403.

BSC next argues that the court's exclusion of prosecution history statements concerning the "thin-walled" limitation constitutes prejudicial error and warrants a new trial on infringement of the Express stents. BSC argues that the court "admitted the entire reexamination prosecution history of the Palmaz '762 patent into evidence, confirming its relevance." (D.I. 401 at 31, citing D.I. 366 at 734:13-735:9) In addition, BSC contends that "[t]his document also contains an admission that goes to the very heart of the infringement issue: Cordis' representation to the PTO that a device with a wall thickness of between .0035 and .0045 inches is not 'thin-walled.'" (D.I. 401 at 31-32) According to BSC, it sought to rely on such evidence to show that "Cordis admitted that a device with a wall thickness that ranged from between .0035 and .0045 inches [the Ersek device] is not 'thin-walled' within the meaning of the Palmaz '762 patent." (D.I. 401 at 32) However, the court, in sustaining Cordis' objection to BSC's line of questioning on that

evidence, noted that BSC's argument based on the file history would have been "incorrect." (D.I. 367 at 967:18-23) The discussion of the Ersek device in the file history was focused on showing that the Ersek device has a "double thickness" and was not directed to excluding devices which have a wall thickness of more than .0035 inches. See Cordis v. AVE, 339 F.3d at 1362 (describing the discussion of the Ersek device in the file history as one which "disclaimed coverage of any device with a variation of at least 100 percent"). As Cordis notes, the file history comments at issue have previously been the subject of improper argument with respect to the "thin-walled" limitation. For example, in the related Civ. No. 97-550-SLR case, Medtronic AVE cited that passage in support of its argument that "stents having wall thicknesses greater than .0035 inches cannot be thin." (Civ. No. 97-550-SLR, D.I. 718 at 13-15) This court rejected that attempt to place a numeric limit on "thin-walled", instead construing that limitation to mean that "[t]he wall of the tubular member must 'hav[e] little extent from one surface to its opposite at both its first and second diameters'", consistent with its construction in this case. Similarly, the Federal Circuit in Cordis v. AVE, 339 F.3d 1361-62, rejected the argument that the "substantially uniform thickness" limitation in the '762 patent is limited to variations of less than 0.001 inch. Because the purpose with which BSC sought to use the file history was

incorrect, the court was correct in not allowing the file history statements to be presented to the jury, where they likely would have been "confusing and unduly prejudicial." (D.I. 367 at 967:18-23) Thus, no error took place through the court's exclusion of this evidence.

As with its motion for judgment as a matter of law of noninfringement, BSC's motion for a new trial on the issue of infringement shall be denied.

B. Cordis' Renewed Motion for Judgment as a Matter of Law, Or, in the Alternative, a New Trial on Infringement and Invalidity of the '021 Patent

1. Infringement

Cordis focuses its argument with respect to infringement on two areas. First, Cordis contends that, for various reasons, the "corners" limitation in claim 36 of the '021 patent should not have been found infringed by the BX Velocity stent under the doctrine of equivalents. Secondly, Cordis argues that, as a matter of law, claim 36 of the '021 patent cannot cover "stents whose connected expansion strut pairs are 180 degrees out-of-phase."

With respect to the "corners" limitation of claim 36, the court construed that limitation to mean "a place where two surfaces meet to form an angle." (D.I. 334 at 5; D.I. 392 at 1834:8-11) The jury ostensibly determined that the semicircular arcs in the BX Velocity stent do not have corners under the

court's claim construction and, therefore, found that they do not literally infringe claim 36. (D.I. 381) However, the jury found that the BX Velocity stent infringes the "corners" limitation of claim 36 under the doctrine of equivalents. (Id.)

Cordis argues that application of the doctrine of equivalents to the "corners" limitation vitiates that limitation and violates the "all elements rule." (D.I. 398 at 3-10) In particular, Cordis contends that the "corners" limitation is impermissibly eliminated when the doctrine of equivalents is applied because "a finding that the 'purely circular arcs' in the BX Velocity are equivalent to 'corners' would vitiate this 'clear structural limitation' because circles do not have corners." (D.I. 398 at 6) Cordis argues that BSC's application of the function/way/result theory vitiated the "corners" limitation by "treating the place where two surfaces meet as a corner, **regardless of its configuration**" and by "eliminat[ing] altogether the function of eight of the sixteen corners specified in the claim." (D.I. 398 at 7, 8) (emphasis in original) BSC introduced testimony that the rounded corners of the BX Velocity stent found at the intersection of the expansion struts and joining struts perform substantially the same function in substantially the same way to achieve substantially the same result as corners that form angles. (D.I. 388 at 1022:3-1024:4, 1056:25-1058:24) Based on the evidence offered, the differences between the rounded corners

of the BX Velocity stent and the "corners" described in claim 36 of the '021 patent appear to be minor variations like those contemplated by the Supreme Court in Graver Tank & Mfg. Co. v. Linde Air Prods. Co., 339 U.S. 605, 608 (1950) ("[I]f two devices do the same work in substantially the same way, and accomplish substantially the same result, they are the same, even though they differ in name, form or shape.") (internal citation omitted). The testimony of Dr. Moore also supports this conclusion in suggesting that "no substantial differences" exist between the corners of the BX Velocity stent and the corners claimed in the '021 patent. (D.I. 388 at 1023:25-1024:4) The rounded corners of the BX Velocity stent are found where its expansion struts meet its joining struts, consistent with what is detailed in the '021 patent. '021 patent, col. 7, ll. 43-45; col. 9, ll. 26-27. Similarly, some embodiments of the '021 patent use corners as reference points and have points of attachment which are offset from the corners. '021 patent, col. 12, ll. 32-44; col. 13, ll. 56-61; col. 14, ll. 10-21. Thus, the functions of each of the sixteen corners specified in claim 23 (on which claim 36 depends) are covered in the analysis offered by BSC.

Cordis argues that BSC's doctrine of equivalents analysis was flawed because it was "utterly silent on the requirement that a corner must 'form an angle.'" (D.I. 398 at 8-9) While the risk

of vitiation of claims through use of the doctrine of equivalents must be recognized and avoided, it is necessary to acknowledge that any analysis of infringement under the doctrine of equivalents must deal with subject matter that does not fall within the literal scope of the claim language. See Ethicon Endo-Surgery, Inc. v. U.S. Surgical Corp., 149 F.3d 1309, 1317 (Fed. Cir. 1998). Here, although the language of the '021 patent does not address "purely circular arcs," it is still possible that a product having such a structure would infringe the "corners" limitation of the '021 patent under the doctrine of equivalents. In applying the doctrine of equivalents to the "corners" limitation of claim 36 of the '021 patent, it is not proper to import a strict "angle" requirement into that limitation, since doing so would place strictures on the analysis which would cause it to instead become an evaluation of literal infringement.

Cordis further posits that the semicircular arc structure of the BX Velocity stent is outside the reach of the doctrine of equivalents because such a structure is expressly or impliedly excluded from the claims of the '021 patent. As noted by BSC, the rounded corner structure is not excluded from the '021 patent. In fact, the specification of the '021 patent states that "preferably corners 176 and 178 are rounded to remove sharp edges and provide increased flexibility" and that "rounded

corners provide stent 10 with greater expandability and reduce stress in the stent strut material at the corners in the expanded stent." '021 patent, col. 12, ll. 7-11.

Cordis next contends that BSC provided insufficient evidence to support a verdict of infringement under the doctrine of equivalents. Based on the evidence mentioned above, namely the testimony of Dr. Moore, BSC provided sufficient evidence to support the verdict of infringement. Dr. Moore provided testimony that the rounded corners of the BX Velocity stent are equivalent to "corners" that form angles. (D.I. 388 at 1019:22-1021:18) Additionally, Dr. Moore offered testimony regarding the application of the doctrine of equivalents to the corners of the BX velocity stent using a "function-way-result" analysis. (D.I. 388 at 1022:3-1024:4; 1056:25-1058:24) In contrast, Dr. Buller, testifying as an expert for Cordis, did not offer an analysis under the "function-way-result" test when analyzing whether there were differences between the rounded corners of the accused device and the "corners" limitation of the '021 patent. (D.I. 390 at 1306:18-1308:10)

Cordis' final argument as to why the "corners" limitation in claim 36 of the '021 patent should not have been found infringed under the doctrine of equivalents is that it was prejudicial error to permit Dr. Moore to testify for BSC on the issue of equivalents. Cordis premises this argument on an assertion that,

since Dr. Moore did not sufficiently explain his views on the doctrine of equivalents in his expert report, Fed. R. Civ. P. 26(a)(2)(B)[7] was violated. (D.I. 398 at 12-14) The particular view of Dr. Moore at issue is one which was contained in his expert report:

> The corners of the BX Velocity . . . perform substantially the same function in substantially the same way to achieve substantially the same result as the "first corners" and "second corners" of the "first expansion column" in Claim 36.

(D.I. 398, ex. 3 at 3, 5) Cordis argues that, based on such an "utterly conclusive analysis," Dr. Moore's report "failed to address the Court's claim construction" and was "so vague and sketchy" that it left Cordis with "'no idea why he thinks . . . [the BX Velocity] somehow has the equivalent of [corners].'" (D.I. 389 at 47:5-10; D.I. 398 at 13-14) Cordis offered these arguments at trial in an effort to exclude the testimony of Dr. Moore on equivalents. (D.I. 389 at 45:19-47:17) The court addressed this issue when it allowed that testimony, reasoning that the discussion, charts and diagrams of that report provided a sufficient basis to include Dr. Moore's testimony in the record. (D.I. 389 at 51:18-19; 52:14-17; 53:25-54:1) While the analysis offered in the expert report of Dr. Moore may not have

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[7]The rule provides, in relevant part, that an expert who will testify at trial must provide a report that "shall contain a complete statement of all opinions to be expressed and the basis and reasons therefor . . . ." Fed. R. Civ. P. 26(a)(2)(B) (2005).

directly addressed the claim construction adopted by the court, Dr. Moore's testimony was consistent with the contents of his report and no violation of Fed. R. Civ. P. 26(a)(2)(B) was apparent. Furthermore, the court finds no evidence of prejudicial surprise due to the testimony of Dr. Moore for the following reasons: (1) Cordis deposed Dr. Moore before trial and specifically questioned him regarding his report (D.I. 407, ex. C); (2) Cordis had the opportunity to rebut Dr. Moore's testimony at trial with contrary evidence such as expert testimony in order to cure any alleged prejudice; and (3) BSC was not under an obligation to draft a supplemental expert report to address the court's claim construction, since Dr. Moore's testimony had its basis in his original report.

Cordis' second argument for noninfringement under the doctrine of equivalents is that, as a matter of law, claim 36 of the '021 patent cannot cover "stents whose connected expansion strut pairs are 180 degrees out-of-phase." As an initial matter, the court addressed this issue before trial when considering the construction of the "wherein" clause of claim 36 of the '021 patent. Cordis had sought a construction of the "wherein" clause of claim 36 that excluded 180 degree out-of-phase stent structures. (D.I. 232 at 17-36) In construing the claims,[8] the

[8]The court construed the limitation "wherein the first expansion strut of the first expansion strut pair in the first expansion column has a longitudinal axis offset from a

court rejected Cordis' argument on this issue, noting that "Cordis argues that claim 23, as properly construed, does not include stents that are 180 degrees out of phase . . . . [T]he court finds that there has not been a clear surrender of subject matter."[9] (D.I. 340 at 10, 13) Aside from the fact that the court construed claim 36 to cover stents which are 180 degrees out of phase, evidence was adduced at trial to suggest that the '021 patent claims such stents. For example, the specification discloses stents having expansion strut pairs that "have their open ends . . . facing each other." '021 patent, col. 6, ll. 51-55. This disclosure appears to include 180 degree out-of-phase structures. Furthermore, Dr. Moore testified at trial that claim 36 must include 180 degree out-of-phase structures. (D.I. 388 at 1027:12-1029:9) While Cordis next argues that "corresponding expansion strut pairs" of the '021 patent must be horizontally aligned such that they are never 180 degrees out of phase (D.I. 398 at 17-18), there is no support for reading such a limitation into the claims. In addition, although Cordis asserts that claim 36 requires that "connected strut pairs are on different levels

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longitudinal axis of the first expansion strut of the second expansion strut pair in the second expansion column" to mean that "the first expansion strut in the first column does not share a longitudinal axis with the second expansion strut in the second column." (D.I. 334 at 6)

[9]Claim 36 of the '021 patent depends from claim 24, which itself depends from claim 23. '021 patent, col. 19, l. 53 - col. 21, l. 23; col. 22, ll. 42-52.

(offset from one another)," there is nothing in the patent which requires such a reading of the claim. (D.I. 398 at 19) The "wherein" clause, as discussed above, is the only limitation of claim 36 which requires an offset, and that clause was construed to permit connected expansion strut pairs which are 180 degrees out-of-phase and are not offset from one another. Overall, the evidence suggests that claim 36 of the '021 patent covers "stents whose connected expansion strut pairs are 180 degrees out-of-phase."

As shown above, based on the evidence offered at trial, the jury's verdict was supported by substantial evidence. Having reviewed the parties' post-trial briefs and the record, the court shall deny both Cordis' renewed motion for judgment as a matter of law of noninfringement and its motion for a new trial on infringement.

2. Invalidity

With respect to its argument of invalidity of claim 36 of the '021 patent, Cordis first asserts that claim 36 does not deserve the benefit of the April 26, 1996 filing date of the inventor's provisional application. As a second contention for invalidity of claim 36, Cordis argues that the '021 patent was rendered invalid for obviousness as of its priority date in light of the prior art. Finally, as an alternative to its arguments

regarding judgment as a matter of law of invalidity, Cordis asserts that the court should grant a new trial on obviousness.

With respect to the priority date for claim 36, the application that issued as the '021 patent was filed by its inventor on April 25, 1997. At trial, BSC sought the benefit of the April 26, 1996 filing date of a provisional application by the same inventor. (D.I. 388 at 1060:1-1061:9; 1145:20-22) Cordis argues that the particular priority date is important because "in early 1997 - between the two filing dates - other groups of researchers had created stents with curvy, bottom-to-top connectors." (D.I. 398 at 24) Cordis contends that claim 36 would only be entitled to the benefit of the earlier filing date if the provisional application provided a "written description" of claim 36 which disclosed all its limitations; Cordis argues that the provisional application failed to do this. (D.I. 398 at 25-28) Specifically, Cordis suggests that the provisional application disclosed strut pair connectors in a "top-to-top" or "bottom-to-bottom" configuration, but not the "bottom-to-top" configuration of claim 36. (D.I. 398 at 25-26) Cordis finally posits that, although the provisional application stated that "variations" from what the application actually disclosed were covered under it, this cannot be viewed as a full disclosure of all the limitations of claim 36. (D.I. 398 at 26-27 (citing

Lockwood v. America Airlines, Inc., 107 F.3d 1565, 1571-72 (Fed. Cir. 1997)))

In contrast to the assertions of Cordis, BSC argues that the limitations of claim 36 were covered in the provisional application and offers testimony from Dr. Moore to that effect. (D.I. 388 at 1060:1-1061:9) In addition, BSC notes that the provisional application describes "split level" connectors and includes multiple embodiments of such connectors in the invention through words and figures, but nowhere limits the invention to a particular configuration such as "bottom-to-bottom," "top-to-top" or "bottom-to-top" connectors. (D.I. 407 at 25) As correctly noted by BSC, although the written description requirement can be satisfied by a precise description of what is claimed in the subject matter, an exact depiction of the claimed subject matter is not necessary to satisfy that requirement. See, e.g., Koito Mfg. Co. v. Turn Key Tech., LLC, 381 F.3d 1142, 1154 (Fed. Cir. 2004) ("Terms need not be used in haec verba . . . . Instead, we have explained that the written description requirement can be satisfied by 'words, structures, figures, diagrams, formulas, etc.'") (internal citations omitted). Furthermore, Lockwood v. American Airlines, Inc., cited by Cordis, notes that "the meaning of terms, phrases, or diagrams in a disclosure is to be explained or interpreted from the vantage point of one skilled in the art." 107 F.3d 1565, 1572 (Fed. Cir. 1997). Dr. Moore's testimony at

trial suggested that, based on what was disclosed in the provisional application, one of ordinary skill in the art would recognize that the limitations of claim 36 were contemplated by that application. In light of his testimony, one of ordinary skill in the art could reason that the following disclosures of the provisional application cover the subject matter of claim 36: (1) "split level" or offset connecting struts; (2) illustrations of such connecting struts; (3) the specification language detailing that variations of the offset connectors in the figures of the provisional application are covered by that application. Such evidence supports the 1996 priority date for claim 36 of the '021 application. The jury was entitled to rely on such evidence in evaluating the appropriate date of priority and finding an April 1996 priority date for claim 36 of the '021 patent.

As a second contention for invalidity of claim 36, Cordis argues that the '021 patent was rendered invalid for obviousness as of its priority date in light of the prior art. Cordis mentions the patents of Palmaz, Pinchasik, Richter, Israel and Brown as examples of stents in the prior art which had characteristics ("diagonal, offset connectors" and "curvy connectors") that would render the '021 patent obvious. (D.I. 398 at 28-29) Furthermore, Cordis suggests that combining these ideas to create "stents with curvy bottom-to-top connectors" was so obvious that engineers at Jomed and United States Surgical

each created such a stent before March 1997. (D.I. 398 at 29) In light of these arguments, Cordis concludes that judgment as a matter of law of obviousness is appropriate. However, Cordis does not account for the testimony of Dr. Moore, who suggested that each of Cordis' cited prior art references were distinct from the '021 patent and would not likely be combined to make the '021 patent obvious. (D.I. 388 at 1061:10-1078:8) Furthermore, BSC cites to the testimony of Dr. Buller to suggest that both the Pinchasik and Israel patents actually teach away from a "diagonal, offset connector" and that non-offset connectors were still the "conventional wisdom" when the BX Velocity stent was being designed in 1998. (D.I. 407 at 27-28, citing D.I. 390 at 1365:22-1366:25) In light of such evidence, the jury's verdict of validity of claim 36 of the '021 patent can be sufficiently supported regardless of the particular priority date assigned to claim 36 of the '021 patent.

Cordis argues that improper arguments by counsel for BSC have made it "reasonably probable" that the verdict was influenced by prejudicial statements such that a new trial on obviousness is appropriate. (D.I. 398 at 30) Cordis contends that "the critical issue on obviousness was the priority date for claim 36" and that "BSC's counsel misled the jury" on this issue. (D.I. 398 at 30-31) In particular, Cordis alleges that BSC's counsel misrepresented the intrinsic record when stating to the

jury that "this was specifically considered by the Patent Office, the exact issue of what is the filing date of the Jang ['021] patent was considered by the Examiner." (D.I. 398 at 31, quoting D.I. 391 at 1807:3-7) Furthermore, Cordis takes issue with the assertion by BSC's counsel to the jury that the examiner's notes reflected that "it was determined that the provisional application, which is the 1996 application, relied upon has basis for the longitudinal offsetting and they award the patent in 1996 date." (D.I. 398 at 31, quoting D.I. 391 at 1807:17-19) Cordis maintains that these statements were "completely untrue" and "overstepped the bounds of zealous advocacy." (D.I. 398 at 31-32) As for the latter statement of BSC, Cordis contends that the Patent Office's consideration of priority dealt only with "offset columns" as discussed in independent claims 1 and 23, not with the "offset connectors" of claim 36. (D.I. 398 at 31-33) This contention by Cordis, although possibly correct, may be misplaced since BSC only noted that the Patent Office previously considered the "issue of what is the filing date of the Jang patent" and found that the 1996 provisional application provided a basis for "longitudinal offsetting." In other words, it does not appear that BSC asserted that claim 36 of the '021 patent was deemed to have an April 1996 priority date by virtue of the Patent Office's referenced discussion; rather, BSC's argument appears to be that the PTO's determination of a 1996 priority date of the '021

patent with respect to "longitudinal offsetting" should urge the jury to find a 1996 priority date for the '021 application with respect to the limitations of claim 36. Since Cordis had asserted that various pre-1997 references would render certain limitations of the '021 patent claims obvious, BSC was arguing that a 1996 priority date for purposes of "longitudinal offsetting" should urge such a priority date for "offset connectors." In any case, the jury was free to weigh the credibility of and evidentiary support for this argument in its evaluation of the proper priority date for claim 36.

Cordis further argues that prejudice was present because "it had no opportunity to set the record straight [regarding the statements made by the Patent Office] because BSC's counsel raised the issue in his rebuttal summation." (D.I. 398 at 32) Despite this assertion, BSC referenced the Patent Office's statements at several earlier points during trial and Cordis did not then object to BSC's arguments. As BSC has noted, it discussed the Patent Office's statements during: (1) Dr. Moore's direct testimony (D.I. 388 at 1061:5-9); (2) Dr. Moore's cross-examination (D.I. 388 at 1152:8-15); (3) Dr. Moore's redirect testimony (D.I. 388 at 1163:5-15); (4) BSC's opening summation (D.I. 391 at 1686:13-22); and (5) BSC's rebuttal summation (D.I. 391 at 1807:4-14). (D.I. 407 at 33) In addition, Cordis had and took the opportunity to provide its own argument on this issue

throughout trial, arguing that the '021 patent was not entitled to an April 1996 priority date due to its prosecution history. (D.I. 388 at 1061:5-9, 1152:6-15; D.I. 391 at 1686:13-22, 1753:2-10) In other words, if Cordis had viewed the comments by BSC's counsel as creating a risk of prejudice against its case on obviousness, it took several steps to minimize such a risk and had the opportunity to take several more. Cordis may not now allege prejudice after trial when it did not dispute the propriety of BSC's arguments at trial. See, e.g., U.S. v. Socony-Vacuum Oil Co., 310 U.S. 150, 238-39 (1940) ("[C]ounsel for the defense cannot as a rule remain silent, interpose no objections, and after a verdict has been returned seize for the first time on the point that the comments to the jury were improper and prejudicial."); see also Murray v. Fairbanks Morse, 610 F.2d 149, 152 (3d Cir. 1979) ("Counsel's failure to object precludes him from seeking a new trial on the grounds of the impropriety of opposing counsel's closing remarks").

Even if the comments by BSC's counsel as to the correct priority date did create a risk of prejudice against Cordis, this risk was further minimized for various reasons. First, the specific priority date of claim 36 of the '021 patent may have had a limited effect, if any, on the nonobviousness verdict. As noted above, evidence was present to suggest that the elements of the prior art references cited by Cordis were distinct from the

limitations of claim 36 such that claim 36 was not rendered obvious. Secondly, the court specifically instructed the jury that attorney arguments should not be considered as evidence and that the jury was to weigh the evidentiary support for any arguments which it considered in rendering its verdict. (D.I. 384 at 101:7-8, 105:21-22; D.I. 392 at 1822:15-17) Even if counsel for BSC had misrepresented the conclusions of the Patent Office with respect to the appropriate priority date for claim 36 of the '021 patent, such a misrepresentation would not have been corroborated by the evidence and alone would not have been eligible for consideration as evidence by the jury in its invalidity analysis, per the court's instructions. Thus, even if the priority date of claim 36 were a deciding factor in the jury's determination of nonobviousness, it is unlikely that prejudice would have influenced that verdict.

Cordis offers a second basis for a new trial on obviousness. Cordis argues that "[b]ecause BSC itself has never practiced the Jang ['021] patent, it relied on 'the commercial success of the [allegedly] infringing stents,' i.e., the BX Velocity, D.I. 388 at Tr. 1079:18-1080:5, as a secondary consideration of nonobviousness." (D.I. 398 at 33) Cordis alleges that BSC's nonobviousness argument necessarily depended on the assumption that the BX Velocity stent infringes claim 36. (Id.) Therefore, Cordis argues that a new trial would be needed if the

infringement verdict does not stand. (D.I. 398 at 34) Cordis concludes that a decision granting judgment as a matter of law of no infringement would mean that the BX Velocity stent does not practice claim 36 and that its commercial success could not count as a secondary consideration for nonobviousness. (Id.) Furthermore, Cordis argues that the grant of a new trial on infringement would leave open the issue of whether the BX Velocity stent practices claim 36 for determination at a new trial. (Id.) Regardless of whether the jury's verdict of nonobviousness depended on its conclusion with respect to infringement, the court shall grant neither a new trial on the issue of infringement nor judgment as a matter of law of no infringement. Therefore, no new trial on obviousness shall be granted.

3. Prejudice

As a distinct argument for judgment as a matter of law (or, in the alternative, a new trial) on all issues, Cordis argues that "inflammatory and improper" arguments by BSC's counsel were delivered to the jury. (D.I. 398 at 34-40) Cordis alleges that BSC accused Cordis of copying even though BSC had no evidence to support such an accusation, had not alleged copying before trial, and had promised to refrain from making arguments related to copying during trial. (Id.) Specifically, Cordis contends that

the following argument in the closing statements of BSC's counsel was "baseless and inflammatory":

> From 1995 to the year 2000, they fell out of the market. The Crown failed. The MiniCrown failed. The CrossFlex failed. Couldn't get it to work. They could not make it work with all their resources. They met with Dr. Jang in the year 2000, for the first time, they launched a product with a curvy offset connector called the BX Velocity. They immediately got 30 percent of the market and it was due to the flexibility. They took Dr. Jang's invention and it's not right. Don't let them get away with it.

(D.I. 391 at 1702:18-1703:2) After hearing this argument, the court stated that it was "a little uncomfortable with the very last argument" because "there's no evidence of copying. It just leaves the wrong impression." (D.I. 391 at 1703:10-12) Furthermore, the court noted that "copying is not alleged in this case . . . . I've been chastising you for it since the beginning." (D.I. 391 at 1704:21-23; 1705:3-5) Although counsel for BSC maintained that this argument was focused on proving a "secondary consideration" (D.I. 391 at 1706:4-5) for purposes of proving "nonobviousness" (D.I. 391 at 1706:22-23), the court disagreed and maintained that the argument constituted an allegation of copying (D.I. 391 at 1717:1-13). Cordis argues that this argument "introduc[ed] extraneous matter which ha[d] a reasonable probability of influencing the verdict." (D.I. 398 at 38, quoting Ayoub v. Spencer, 550 F.2d 164, 170 (3d Cir. 1977)) Therefore, Cordis urges a new trial on infringement and invalidity of the '021 patent.

Despite these arguments by Cordis, the comments by counsel for BSC regarding copying do not warrant a new trial. First, after the court expressed concern about the inference of copying which was apparent in the closing arguments of BSC's counsel, Cordis requested a curative instruction. In particular, Cordis requested that the jury be instructed that "you've heard argument that Dr. Jang met with representatives of Cordis. You should understand that there is no charge of copying, there's no charge in this case that Cordis copied Jang's design." (D.I. 391 at 1710:3-7) The court offered Cordis the opportunity to either address the issue in its closing argument or have the court deliver its proposed instruction with respect to copying. (D.I. 391 at 1720:7-18) Cordis decided not to have the court deliver its proposed instruction and instead addressed the issue in its closing argument. (D.I. 391 at 1720:19; 1732:6-1734:14) In its motion for a new trial, Cordis reasons that it refused to have the court deliver its proposed instruction because it would "ma[ke] matters worse." (D.I. 398 at 39) If Cordis believed that a curative instruction would have been insufficient, it should have moved for a mistrial. See Dougal v. Williams, 294 F. Supp. 1357, 1358 (E.D. Pa. 1968), aff'd, 405 F.2d 867 (3d Cir. 1969) (finding that it was "too late now for this complaint" regarding plaintiff's counsel's misconduct when there was "ample opportunity" for defense counsel to have moved for a mistrial).

Instead, Cordis did not move for a mistrial but discussed the issue of copying in its closing argument. Instead of allowing the court to either instruct the jury as to the issue of copying or consider a motion for a mistrial, Cordis made an attempt at trial to cure what it alleged was prejudice; Cordis is not entitled to a new trial merely because it now believes its attempt was unsuccessful.

Even if there were a risk of prejudice due to the statements by BSC's counsel regarding copying, such risk of prejudice was minimized by the court. First, the court repeatedly instructed the jury that counsel's arguments are not evidence. (D.I. 384 at 101:7-8, 105:21-22; D.I. 392 at 1822:15-17) Secondly, the court did not instruct the jury as to copying, which prevented the jurors from considering copying in evaluating the issues. As even Cordis admits, such a measure prevented the court from "put[ting] that word [copying] in the jurors' mind." (D.I. 398 at 38-39, quoting D.I. 391 at 1715:19-20) Furthermore, the court instructed the jury to consider evidence of "independent development" as tending to show obviousness or nonobviousness.[10]

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[10]In informing the jury of the appropriate considerations it should weigh in evaluating the validity of claim 36 of the '021 patent, the court stated:

> Another objective factor you must consider in determining whether Claim 36 of the Jang '021 patent is obvious or nonobvious is that of simultaneous invention. The independent development or making of an invention by others before, or at about the same time

The statements by BSC's counsel regarding Dr. Jang's meetings with Cordis presented evidence on the issue of whether Cordis independently developed the BX Velocity stent. With no instruction on copying, the jury was entitled to consider this evidence in evaluating the issue of obviousness of claim 36 of the '021 patent. In light of these instructions by the court, it was unlikely that the statements of BSC's counsel with respect to copying had improperly influenced the verdict.

B. BSC's Motion for Reconsideration of the Without Prejudice Aspect of the Court's Order Dismissing Cordis' Infringement Claims Against the Taxus Liberté Stent

BSC's motion for reconsideration stems from the court's "without prejudice" grant of judgment as a matter of law of noninfringement with respect to the Taxus Liberté stent. After the close of Cordis' evidence at trial, BSC had moved for judgment as a matter of law of noninfringement with respect to the Taxus Liberté stent because it alleged that Cordis had failed to offer evidence to support any theory of infringement under 35 U.S.C. § 271. (D.I. 367 at 1027:17-1028:1; 1030:25-1031:5) In opposing that motion, Cordis alleged that it had evidence of U.S. activity with respect to the Taxus Liberté stent that would prove

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> as, the invention disclosed in the patent in suit, may tend to show the obviousness or nonobviousness of the invention of the patent in suit.

(D.I. 392 at 1848:7-14)

infringement under 35 U.S.C. § 271(f)[11]; Cordis admitted that it deliberately chose not to introduce this evidence at trial since it believed its § 271(f) argument was no longer applicable when its infringement case narrowed from coating claims to only structure claims. (D.I. 368 at 1054:13-22; 1056:10-1057:25; 1058:21-25) Cordis argues that it did not offer separate proof about the jurisdictional nexus of the Taxus Liberté stent in addition to that offered for the bare metal Liberté stent because it considered the Taxus Liberté stent to be only a different model of the Liberté stent with the same structure and a Taxus

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[11]35 U.S.C. § 271(f) provides that:

> (1) Whoever without authority supplies or causes to be supplied in or from the United Stated all or a substantial portion of the components of a patented invention, where such components are uncombined in whole or in part, in such manner as to actively induce the combination of such components outside the United States in a manner that would infringe the patent if such combination occurred within the United States, shall be liable as an infringer.
>
> (2) Whoever without authority supplies or causes to be supplied in or from the United States any component of a patented that is especially made or especially adapted for use in the invention and not a staple article or commodity of commerce suitable for substantial noninfringing use, where such component is uncombined in whole or in part, knowing that such component is so made or adapted and intending that such component will be combined outside of the United States in a manner that would infringe the patent if such combination occurred within the United States, shall be liable as an infringer.

35 U.S.C. § 271(f) (2005).

coating added. (D.I. 365 at 414; D.I. 395 at 2-3) The court disagreed and considered the Taxus Liberté stent to be a different product than the Liberté bare metal stent. (D.I. 368 at 1051:17-18) The court granted BSC's motion, but did so without prejudice, reasoning that it lacked jurisdiction over the Taxus Liberté stent. (D.I. 368 at 1307:12-16; 1307:20; 1307:25-1308:2)

As the basis for its motion for reconsideration, BSC argues that the court committed an error of law in "concluding that it did not have jurisdiction to enter JMOL of noninfringement regarding the Taxus Liberté stent, with prejudice." (D.I. 383 at 2) BSC contends that the court "had and has jurisdiction over Cordis' patent infringement claims against the Taxus Liberté stent pursuant to 28 U.S. §§ 1331, 1338(a) and 35 U.S.C. § 271(f). Cordis' failure of proof at trial did not deprive the Court of jurisdiction over Cordis' infringement claim against the Taxus Liberté stent." (D.I. 383 at 6) BSC continues by arguing that Cordis' failure of proof cannot be cured and that judgment as a matter of law for a failure of proof should be made with prejudice. (D.I. 383 at 8-11)

Although the arguments offered by BSC are applicable to a grant of judgment as a matter of law for failure of proof, such was not the basis for the grant of judgment as a matter of law by the court. As explained by the court, "Having researched and

thought about it, I do not believe I have jurisdiction over the Taxus Liberté product and, therefore, BSC's JMOL will be granted and the instructions will refer only to the Liberté stent." (D.I. 368 at 1307:12-16) In specifying the nature of its grant of judgment as a matter of law, the court noted that it was "[c]ertainly without prejudice." (D.I. 368 at 1307:20) When subsequently questioned on this point, the court reiterated its decision in stating, "It is without prejudice. I said I didn't have jurisdiction. I didn't say it was on a procedural basis." (D.I. 368 at 1307:25-1308:2) While BSC focuses its present motion on whether Cordis failed to prove that the Taxus Liberté stent infringed under 35 U.S.C. § 271(f), that issue was not a deciding factor in the court's grant of judgment as a matter of law of noninfringement without prejudice. As the Federal Circuit has noted, a product that is "not made in, used in, sold in, offered for sale in, or imported into the United States" is "outside of the reach of U.S. patent laws." Pellegrini v. Analog Devices, Inc., 375 F.3d 1113, 1118 (Fed. Cir. 2004). With no nexus to the United States, the court had no jurisdiction to grant judgment as a matter of law with respect to the Taxus Liberté stent. As stated in Rule 41(b) of the Federal Rules of Civil Procedure, an involuntary dismissal "under this subdivision and any dismissal not provided for in this rule, **other than a dismissal for lack of jurisdiction**, . . . operates as an

adjudication upon the merits." Fed. R. Civ. P. 41(b) (emphasis added). Since a dismissal due to lack of jurisdiction in not an adjudication upon the merits, it must be without prejudice. See, e.g., Figueroa v. Buccaneer Hotel Inc., 188 F.3d 172, 182 (3d Cir. 1999) (explaining that dismissal for lack of jurisdiction is not a determination on the merits and is without prejudice). As a result, no error of law was committed when the court concluded that it did not have jurisdiction to enter judgment as a matter of law of noninfringement regarding the Taxus Liberté stent with prejudice. BSC's motion for reconsideration, therefore, shall be denied.

V. CONCLUSION

For the reasons stated, BSC's renewed motion for judgment as a matter of law of noninfringement and invalidity is denied and Cordis' renewed motion for judgment as a matter of law or, in the alternative, a new trial on infingement and invalidity of the '021 patent is denied. BSC's motion for reconsideration of the without prejudice aspect of the court's order dismissing Cordis' infringement claims against the Taxus Liberté stent is denied. An order consistent with this memorandum opinion shall issue.

IN THE UNITED STATES DISTRICT COURT

FOR THE DISTRICT OF DELAWARE

CORDIS CORPORATION,	)	
	)	
Plaintiff,	)	
	)	
v.	)	Civ. No. 03-027-SLR
	)	
BOSTON SCIENTIFIC CORPORATION and SCIMED LIFE SYSTEMS, INC.,	)	
	)	
	)	
Defendants.	)	

O R D E R

At Wilmington this 11th day of May, 2006, consistent with the memorandum opinion issued this same date;

IT IS ORDERED that:

1. BSC's renewed motion for judgment as a matter of law of noninfringement and invalidity (D.I. 378) is denied;

2. BSC's motion for reconsideration of the without prejudice aspect of the court's order dismissing Cordis' infringement claims against the Taxus Liberté stent (D.I. 382) is denied; and

3. Cordis' renewed motion for judgment as a matter of law, or, in the alternative, a new trial on infingement and invalidity of the '021 patent (D.I. 398) is denied.

4. The Clerk of Court is directed to enter judgment

consistent with the verdicts (D.I. 360, D.I. 381) reached by each of the juries.

United States District Judge